

16. A mechanical key device formed as a solid unit and fitted for insertion into a lock cylinder, comprising:

(a) a key blade with mechanical bitting to fit a pattern of a lock cylinder,

(b) a key head fixed to the key blade,

(c) the key device including electrical contact means for engaging with a contact of a lock cylinder when the key blade is inserted into the lock cylinder, leading to electronics in the lock cylinder and to an electrically-operated blocking device in the lock cylinder,

(d) a battery and electronics in the key head, and

(e) means for communication between the lock electronics of the lock cylinder and the electronics of the key head when the key blade is inserted into the lock cylinder to determine whether the lock is authorized to be opened, and if so, for sending power from the battery to the lock's blocking device, to allow opening of the lock.

17. The apparatus of claim 16, wherein the means for communication includes microprocessor means in the electronics of the key head, powered by the battery in the key head, whereby the determination as to whether the lock is authorized to be opened occurs in the key head.

18. The apparatus of claim 17, wherein the key head further includes data storage means communicating with the microprocessor means, for storing information regarding locks in which the key device may be inserted.